



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,898	03/01/2004	Todd R. Williams	56523US009	2585
32692	7590	10/05/2006		EXAMINER
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			SIMONE, CATHERINE A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/790,898
Filing Date: March 01, 2004
Appellant(s): WILLIAMS ET AL.

MAILED
OCT 05 2006
GROUP 1700

Stephen W. Buckingham
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 31, 2006 appealing from the Office action
mailed February 13, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,468,540

Lu

11-1995

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 and 13-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by Lu (US 5,468,540).

Regarding claims 1 and 11, Lu discloses a composite article having large scale predictable dimensional stability comprising a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17); and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14) and an opposite surface in adherent contact with the front surface of the backing (see col. 3, lines 60-64). Regarding claims 2, 9, 13 and 20, the metal foil backing comprises aluminum (see col. 10, line 46). Regarding claims 3 and 14, the radiation cured polymer is a cured oligomeric resin (see col. 8, line 1). Regarding claims 4 and 15, the metal foil backing is inherently e-beam radiation transmissive since it is aluminum (see col. 10, line 46).

Regarding claims 4-6 and 15-17, the limitations “is cured by electron beam radiation”, “is cured by actinic radiation” and “is cured by thermal radiation” are methods of production and therefore do not determine the patentability of the product itself. Process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113.

Regarding claims 7, 8, 10, 18, 19, 21 and 22, the recitations “shaped for receiving and holding complementarily shaped articles” (claims 7 and 18), “shaped to receive gyricon spheres” (claims 8 and 19), “shaped to receive conductive spheroids” (claims 10 and 21) and “shaped to provide an article which is useful as an etch mask (claim 22) are all recitations of intended use and it has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 and 23-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (US 5,468,540).

Lu discloses a composite article having large scale predictable dimensional stability comprising a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17); and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14) and an opposite surface in adherent contact with the front surface of the backing (see col. 3, lines 60-64).

However, Lu fails to disclose a distal surface portion distally spaced at least 0.05 mm from an adjacent depressed surface portion and the article having a dimensional change of less than about 100 ppm and 60 ppm. Lu does, however, teach the dimensions of the mircolenses formed from the curable resin (see col. 4, lines 13-15 and col. 8, lines 47-63).

Therefore, the optimum ranges for the spacing and the dimensional change would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the article in Lu to have the distal surface portion distally spaced at least 0.05 mm from the adjacent depressed surface portion and have a dimensional change of less than about 100 ppm and 60 ppm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

(10) Response to Argument

Rejection Under 35 U.S.C. 102(b)

Appellants argue "there is nothing in Lu to suggest the limitation that article have 'long scale predictable dimensional stability'. The Examiner has asserted that the Lu patent teaches this property, but has not cited anything in Lu to suggest it". Appellants then argue "that lines 1 through 4 of page 8 of the specification specifically state that "The term 'long term predictable dimensional stability' refers to the ability of a segment of a shaped sheet-like substrate to retain substantially its predicted dimensions after being heated to a heated environment of 150°C of less

for 60 minutes or less and then returned to room temperature.” Since the Lu patent only teaches polyvinyl chloride which has a glass transition temperature of about 78°C, it certainly does not meet this limitation”. Appellants further argue “the Lu reference does not teach an article with long term predictable dimensional stability as that term is defined”.

First, in response to applicant's argument that the Lu reference fails to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., “*long* scale predictable dimensional stability” and “*long term* predictable dimensional stability”) is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, it is to be pointed out that the recitation “having large scale predictable dimensional stability” in claims 1 and 11 does not have to be given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Third, it is to be pointed out that Lu clearly teaches a composite article having a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17 and see col. 10, lines 30-32); and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional

discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14 and see col. 8, lines 1-18 and col. 10, lines 9-11) and an opposite surface in adherent contact with the front surface of the backing (see col. 3, lines 60-64). Also, it is to be pointed out that the radiation cured polymer taught in Lu consists of a curable oligomeric composition (see col. 8, lines 1-18), which is a similar composition to that of the radiation cured polymer disclosed in Appellants' present invention (see page 7, line 13 of Appellants' specification). Therefore, the article disclosed in Lu inherently has a large scale predictable dimensional stability, as recited in claims 1 and 11.

Rejection Under 35 U.S.C. 103(a)

Appellants argue "because the Lu reference does not teach or suggest that the items have long term predictable dimensional stability as required by all of the presently pending claims, those claims are clearly not anticipated by the Lu patent. Because the Lu patent does not provide anything to suggest or lead one of ordinary skill in the art to the conclusion that it is desirable for the articles to have such stability, much less how such stability could be accomplished, they are also not obvious".

However, as pointed out previously Lu clearly teaches a composite article having a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17 and see col. 10, lines 30-32), and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14 and see col. 8, lines 1-18 and col. 10, lines 9-11) and an opposite surface in adherent contact

Art Unit: 1772

with the front surface of the backing (see col. 3, lines 60-64). Furthermore, it is to be pointed out that the radiation cured polymer taught in Lu consists of a curable oligomeric composition (see col. 8, lines 1-18), which is a similar composition to that of the radiation cured polymer disclosed in Appellants' present invention (see page 7, line 13 of Appellants' specification). Therefore, the article disclosed in Lu inherently has a large scale predictable dimensional stability.

Additionally, it is to be pointed out again that the feature upon which applicant relies (i.e., *long term* predictable dimensional stability) is not recited in the rejected claims. Also, it is to be pointed out that the recitation "having large scale predictable dimensional stability" in claims 1 and 11 does not have to be given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Catherine A. Simone

Catherine A. Simone

September 25, 2006

Conferees:

Jennifer Koll Michener

Rena Dye *R.D.*

J.L. Miller
RENA DYE
SUPERVISORY PATENT EXAMINER

A.U. 1772 9/27/04